



AN OUTBREAK OF BULKHOLDERIA MULTIVORANS AT THE CARDIOLOGY INTENSIVE CARE UNIT. EMPHASIS ON VIGOROUS HYGIENE- EPIDEMIOLOGICAL MEASURES.

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Burkholderia cepacea complex

G- bacteria causing serious illnesses in immunocompromised patients

Resistant to usual antibiotics and disinfectants

Can contaminate even sterile medical devices and solutions

Burkholderia multivorans is one of several strains of B. cepacea complex

Recently, an outbreak of Burkholderia multivorans strain in patients at general ICU has been described, with remarkable mortality of 24%

In this report, the route of transmission has not been identified.

Hanulik et al. J Hosp Inf 2014





Methods

- At the CCU we have identified both prospectively and retrospectively patients with *B. multivorans* infection and analyzed their demographics and hospitalization course.

Results

- Since Feb to Jun 2014 we observed 20 consecutive patients (13 male, average age 70) with *B. multivorans* infection
- Isolates originated from sputum (14x), throat (11x) and nasal cavity (2x)
- Average length of hospitalization 31 days (usual 5 days)

55% heart failure
30% cardiogenic shock
55% pneumonia
30% post CPR

45% (9) died !!!



id	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1 +	Coronary Care Unit									
2 +			Coronary Care Unit							
3 +			Coronary Care Unit							
4			Regular Ward							
5 +				Coronary Care Unit	General ICU	Coronary Care Unit				
6					Coronary Care Unit					
7					Coronary Care Unit	Regular Ward				
8 +					Coronary Care Unit					
9						Coronary Care Unit				
10 +						Regular Ward				
11						Coronary Care Unit	General ICU	Coronary Care Unit		
12						Coronary Care Unit	Cardiac Surgery Ward			
13						Regular Ward				
14						Coronary Care Unit	Regular Ward			
15 +						General ICU	Coronary Care Unit			
16						General ICU	Coronary Care Unit	Regular Ward		Cardiac Surgery Ward
17 +							General ICU	Coronary Care Unit		
18								Regular Ward		
19 +							Coronary Care Unit			
20								Coronary Care Unit		

Coronary Care Unit

Regular Ward

General ICU

Cardiac Surgery Ward



Verified sources of transmission

Humidification device



Disposables used according to recommendation of manufacturer

Thermo reservoirs for tea



Interchangeably used in between CCU and regular ward



Regulatory measures for avoidance of further infection spreading

- Humidification devices and thermobottles eliminated from the use.
- CCU closed, cleaned up, painted

No more cases occurred.

Conclusion

- **B. multivorans**
 - can cause severe infections in general CCU
 - can easily be transmitted by devices containing hot humidified air.
- Radical elimination of identified sources for prevention of further transmissions is warranted.